

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

PROVISIONAL RESTORATION

By

Dr. Lamia Dawood

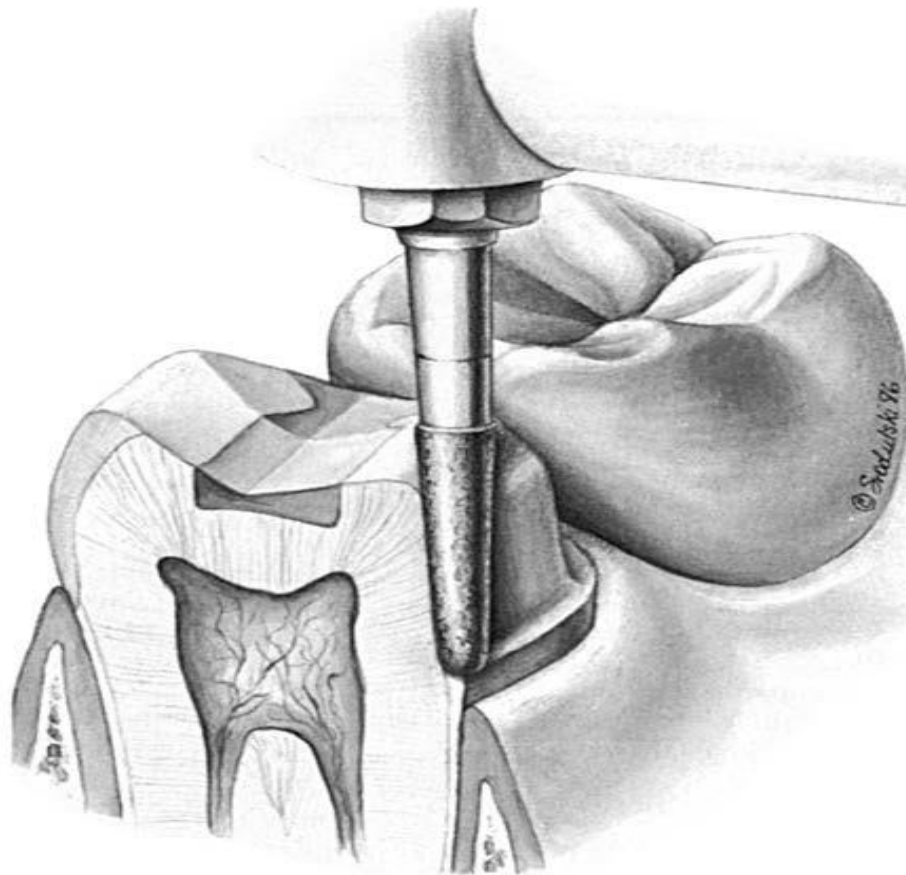
*According to the Glossary of Prosthodontic
,Terms*

A provisional prosthesis : is a prosthesis designed to enhance esthetics, provide stabilization and / or function for a limited period of time, and should be replaced by a definitive prosthesis after a period of .time

:Functions of temporary restorations

: Protection -1

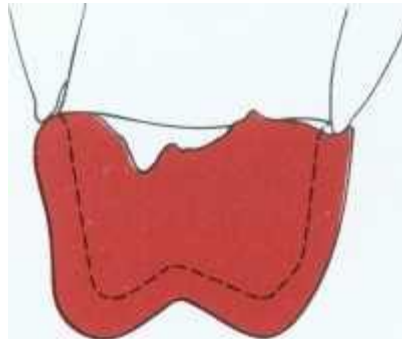
a- Protect the *pulp* of prepared tooth against
.thermal, chemical and physical irritations



.b- Protect the *prepared tooth* against fracture

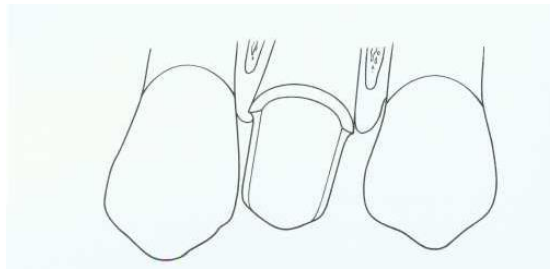


**c- Protect the health of the *periodontal tissue* as it
.enhances the effectiveness of oral hygiene measures**



: Positional stability -2

- a- It maintains the position of the *prepared teeth* mesio-distally
.labio–lingually and occluso-cervically
- b- Properly contoured and fitted provisional restoration maintain
.the position of *gingival tissue*
- c- Maintain the normal esthetic position of *the lip*
- d- The design of the temporary bridge pontic should prevent
ridge alteration by providing normal embrasure and not impinging
.the ridge



: Mastication -3

**Temporary restoration allow for proper mastication during
.final prosthesis fabrication**

: The degree of function depends on

.The ability of its material to resist deformation -1

.Retention of the preparation -2

.Span length -3

.occlusal forces exerted upon the area -4

:Indications for Fiber-reinforced Interim Restorations

- .1 .A long-span posterior partial fixed dental prosthesis
- .2 .Prolonged treatment time
- .3 .Patient's inability to avoid excessive forces on the prosthesis
- .4 .Above-average masticatory muscle strength
- .5 .History of frequent breakage

:Esthetics -4

The temporary restoration offers the needed esthetic level during the construction of the .final restoration

:Diagnostic information -5

:as

.Tooth form -1

.Tooth arrangement -2

.Lip support -3

.Phonetics -4

.Periodontal prognosis of the abutment teeth -5

.Response of teeth to additional occlusal forces -6

Patient tolerance to new: vertical dimension, mandibular -7

.position and interdigitation

: Criteria of ideal provisional restoration

.Should have good marginal fit -1

Should provide adequate occlusion and restore the correct contact to prevent -2

.over eruption of opposing teeth and food impaction

.Should provide adequate esthetic and strength -3

.Should not impinge on the ridge -4

.Should be easily constructed -5

When cemented, it remains stable, stays in place, and is comfortable for the -6

.patient

.Can be readily removed without damage to the tooth or adjacent tissues -7

:Types of temporary restorations

:A- Intra – coronal restorations

.as zinc oxide temporary filling

:B- Extra – coronal restorations

.Custom made acrylic resin crown and bridge -1

:Prefabricated crowns -2

.Tooth colored polycarbonate crown -

.Clear cellulose acetate crown -

Metal crown e.g. Aluminum shell, stainless -

steel and Ni-Chromium crowns (both

.(anatomic and non-anatomic

:Custom made temporary restoration

**It can be constructed either directly inside the patient mouth or-
.indirectly on the cast**

**The indirect technique is more suitable for long span cases, it is-
also more safe as regard to pulp irritation from residual
.monomer and heat generation**

**Recently a new resin is introduced which has no free monomer
.(and minimal heat production (*Ethylene imine resin***

Step by step procedures for fabrication :of custom made temporary restorations

(A :Direct technique

A mold of the desired form of the restoration is -1

: fabricated using either

.Alginate impression -

.Vacuum formed plastic shell -

.Heavy body rubber base impression -

Direct technique using

.Heavy body rubber base impression

**Before taking impression, the cast is corrected for any
abutment defects and any missing teeth should be
.replaced by denture tooth or wax**



**Mix a suitable amount of Heavy body rubber -1
.base impression**



**The mixed rubber base is applied to the
.area of preparation**

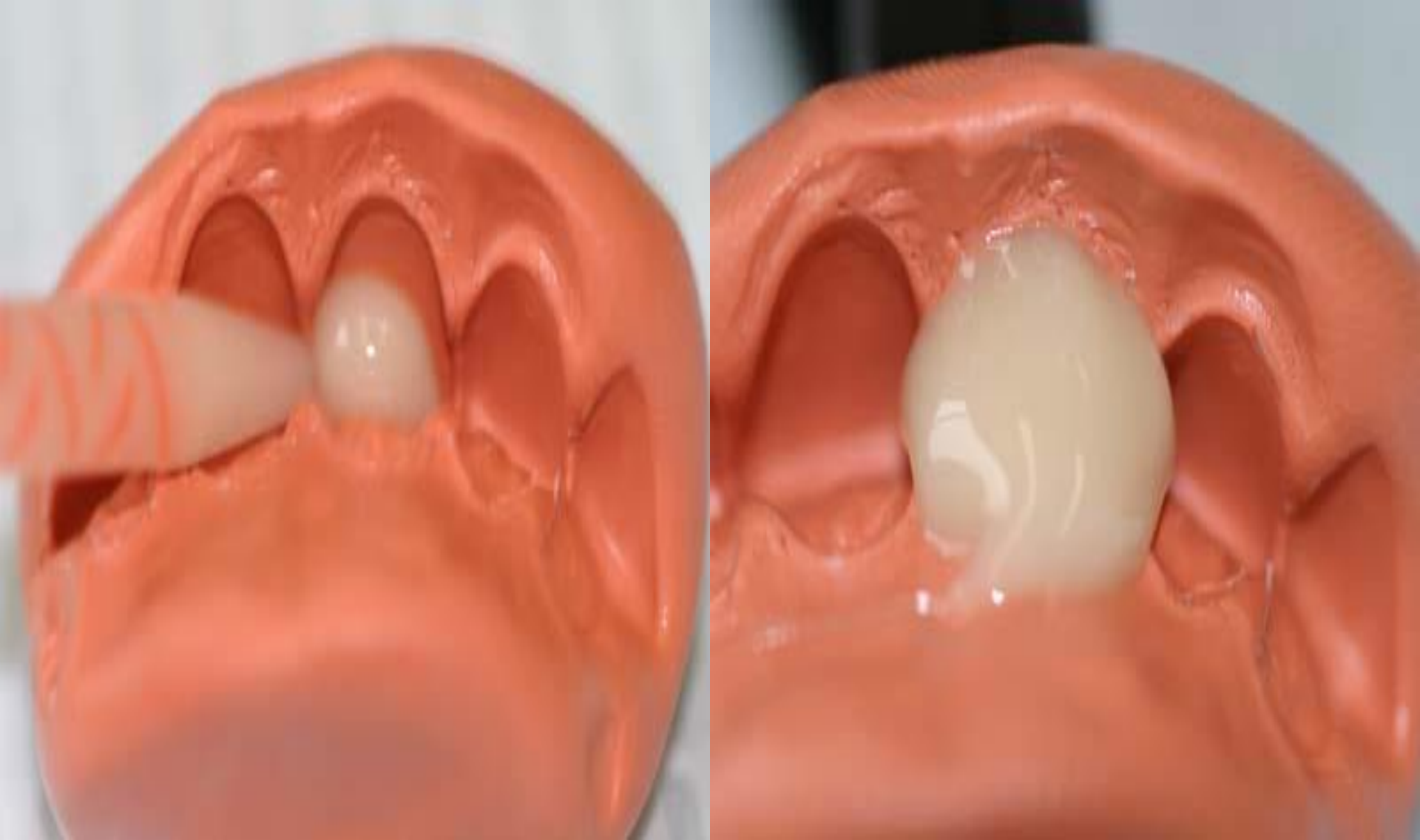




Mix a suitable amount of resin



- Apply a separating medium to the preparation area



The mixed resin is applied to the inside the
.(impression (mold



.The impression is reseated inside the patient mouth





The excess resin is removed and finishing is performed

: The restoration is inspected for

Marginal fitness

Contour

Proximal contact

Centric and eccentric relations







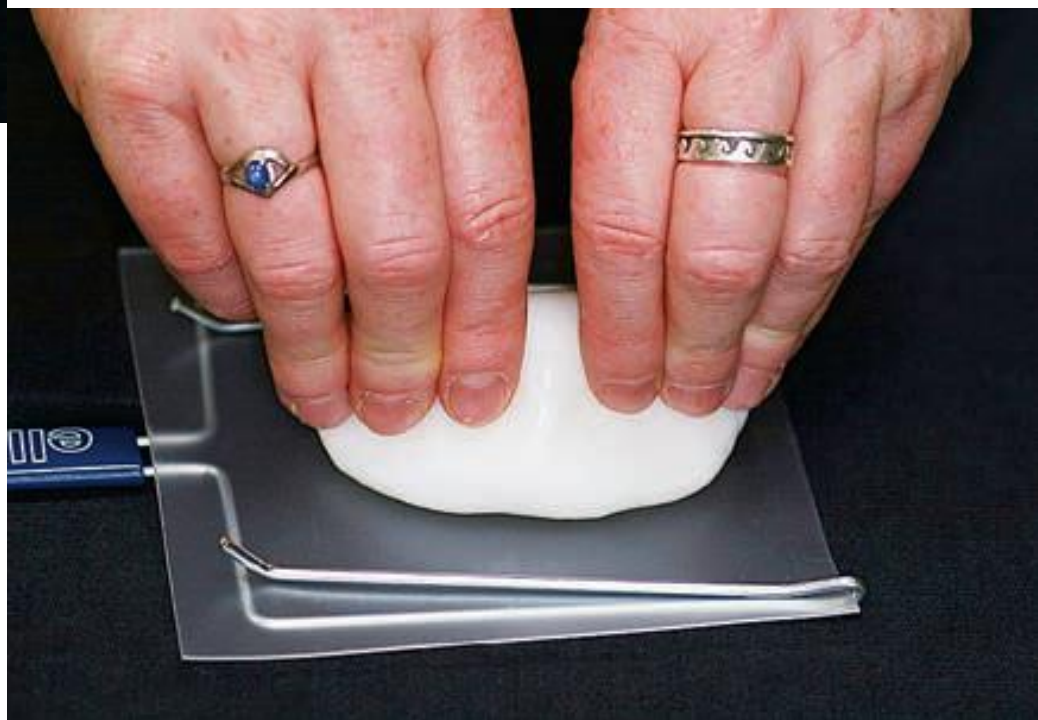


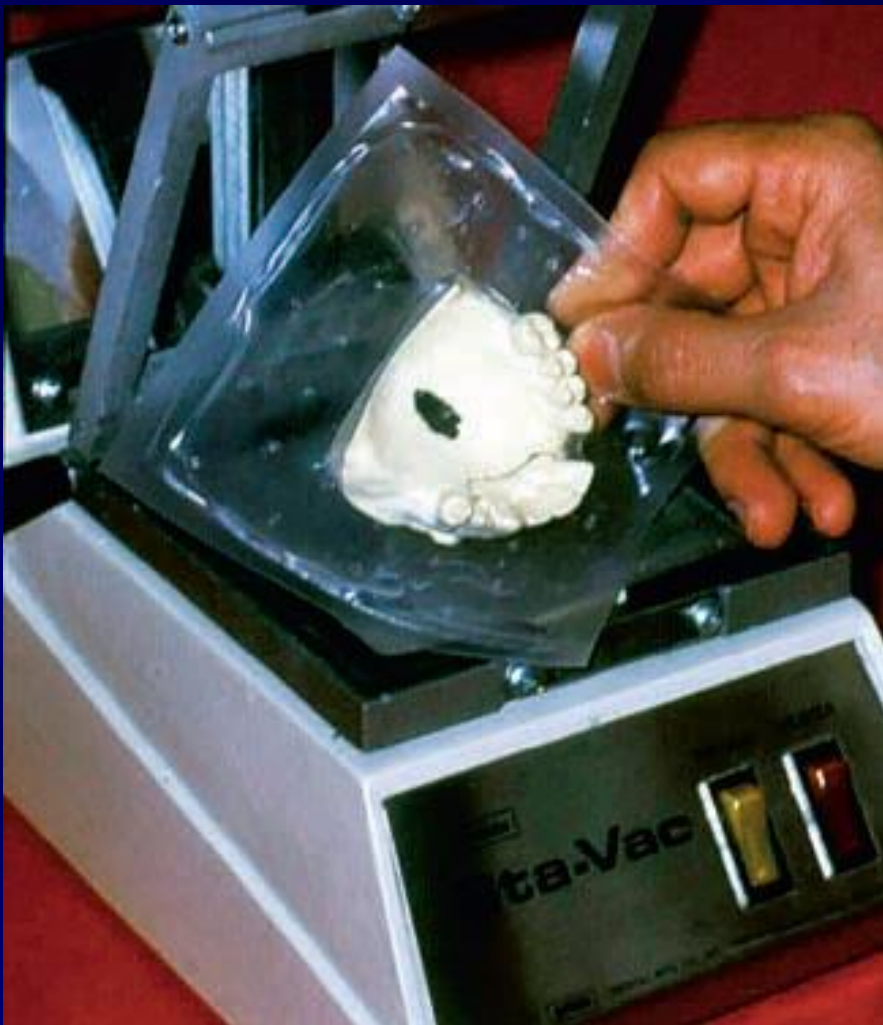


Cementation of the restoration

Direct technique using

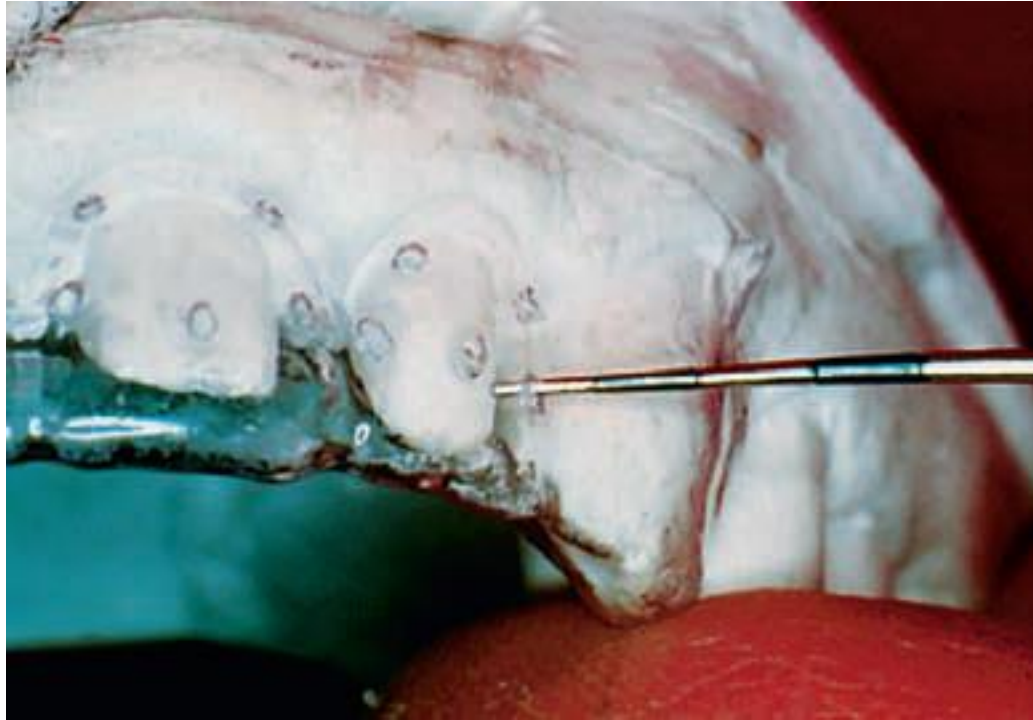
Vacuum formed plastic shell





Medical House Publishing Ltd









Indirect technique

**In this technique , the temporary restoration is built
. on the cast not in the patient mouth**

:Steps

**Impression is taken before teeth preparation to-1
.produce the needed mold**

**After preparation completion, a secondary-2
.impression is taken and poured**

**The cast is placed inside the first impression to-3
.check its accurate seating**

**The prepared teeth and surrounding area of the cast -4
.are coated with resin separating medium**

**The area of the prepared teeth in the impression is -5
filled with resin and fully seated upon the cast
.and held in place by rubber band**

**After complete setting of the resin, the restoration is -6
removed from inside the impression and then
.finished and cemented temporarily in place**



Before tooth preparation, take a preliminary alginate impression

2



3



4



5



6



7



8



9





10



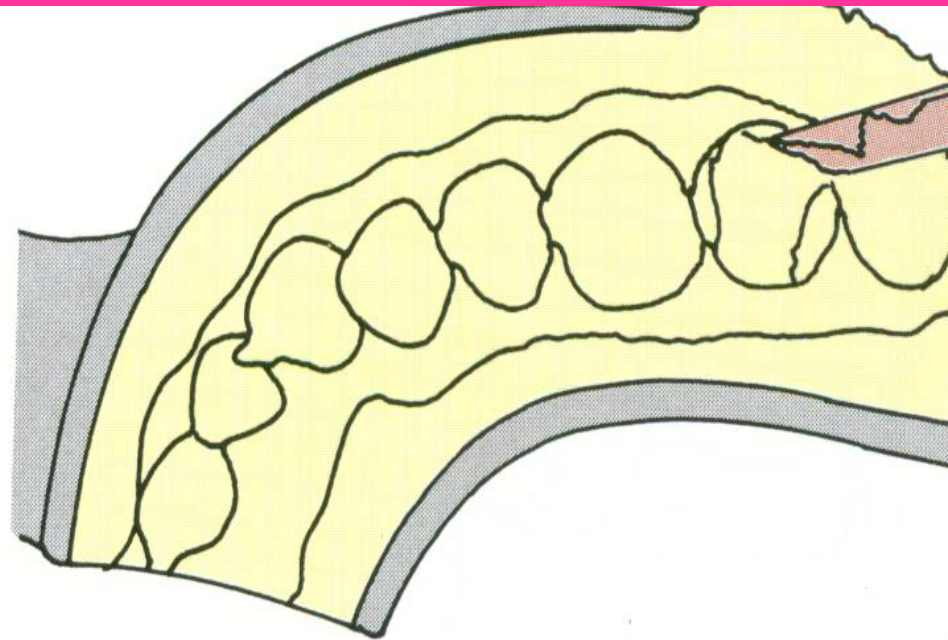
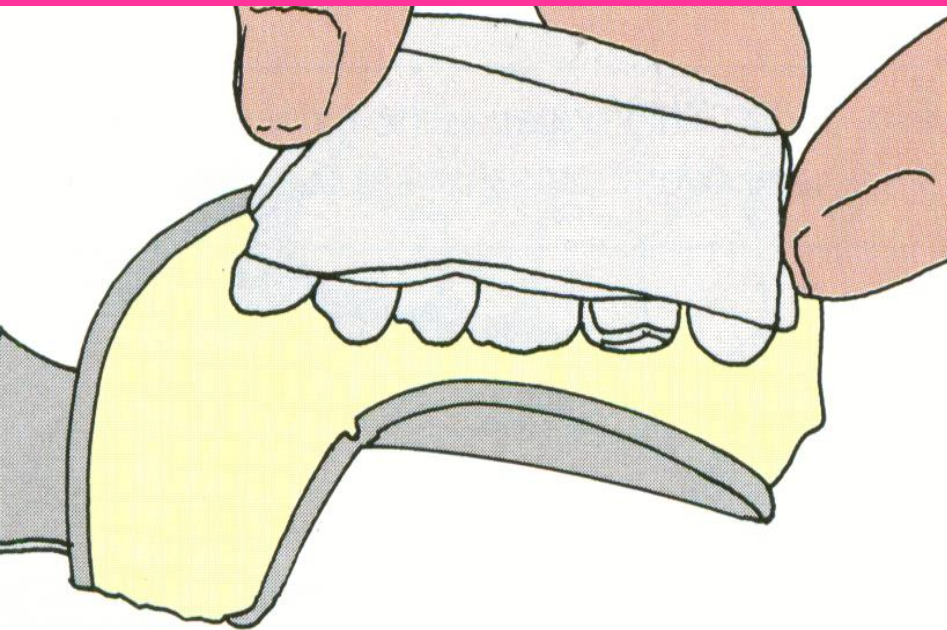
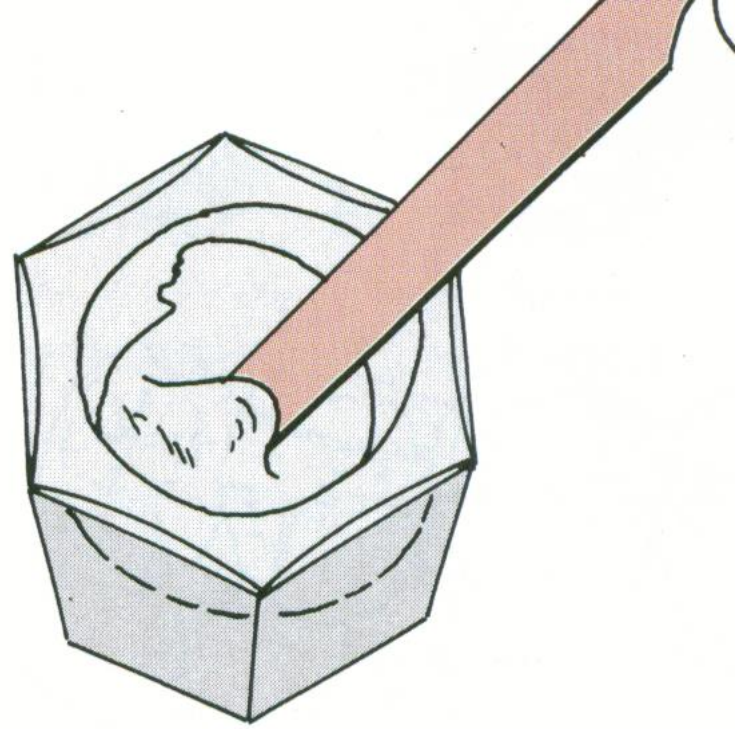
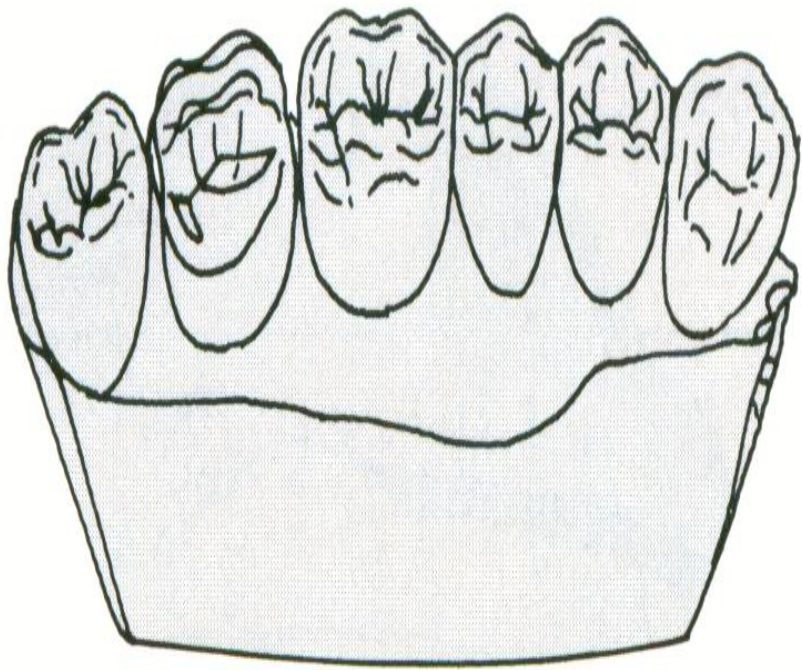
11

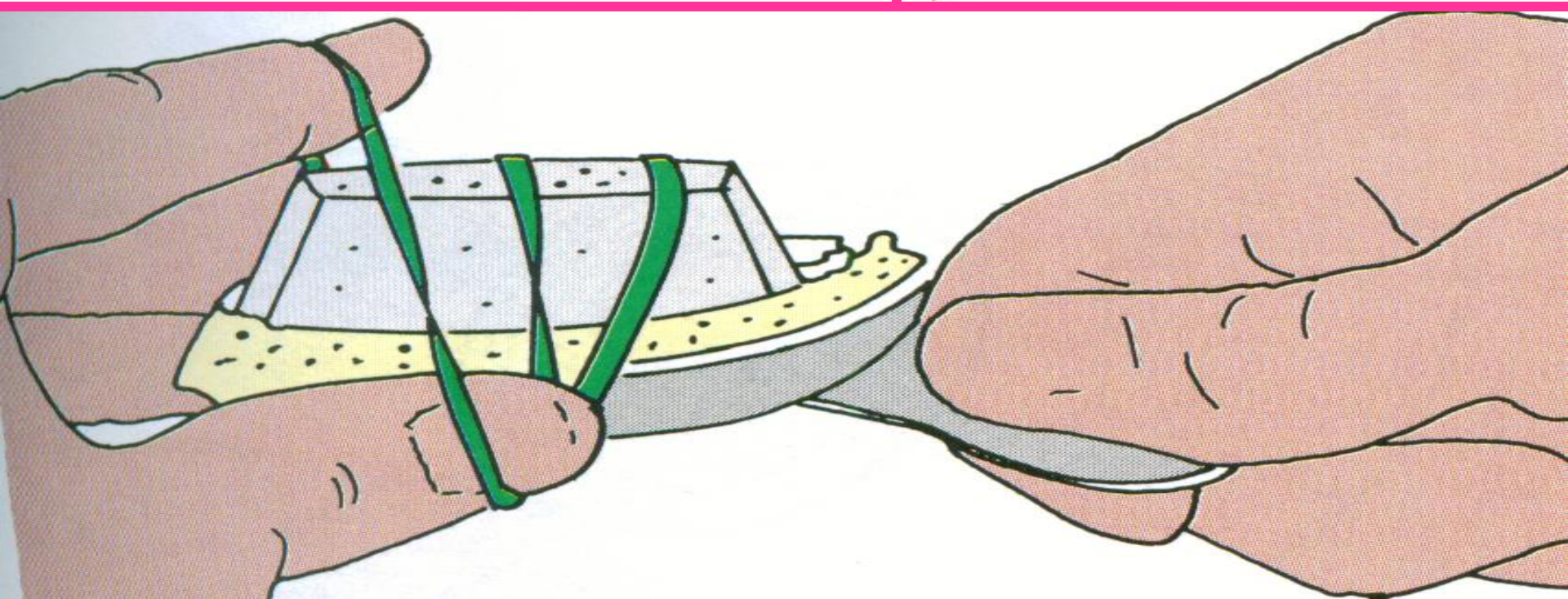
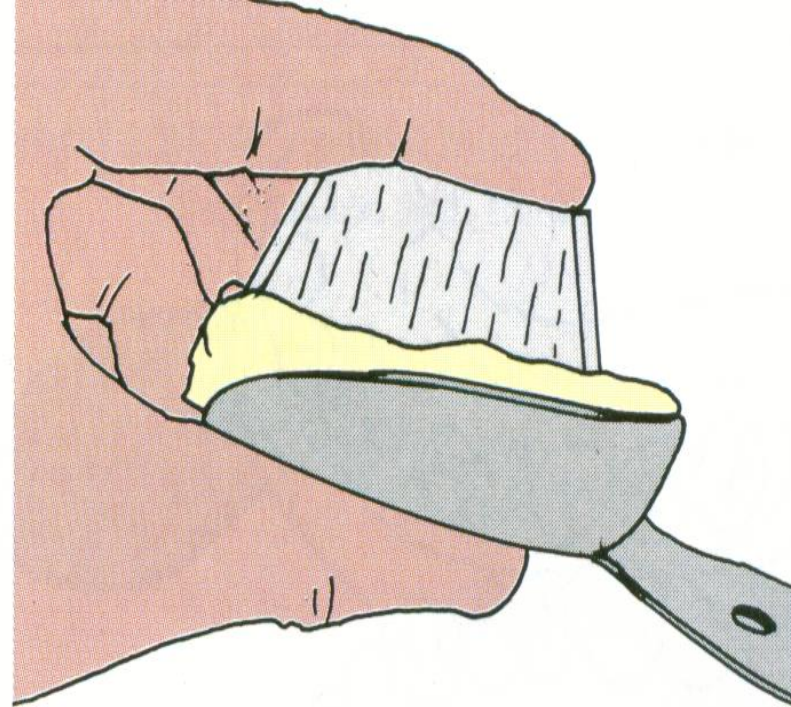
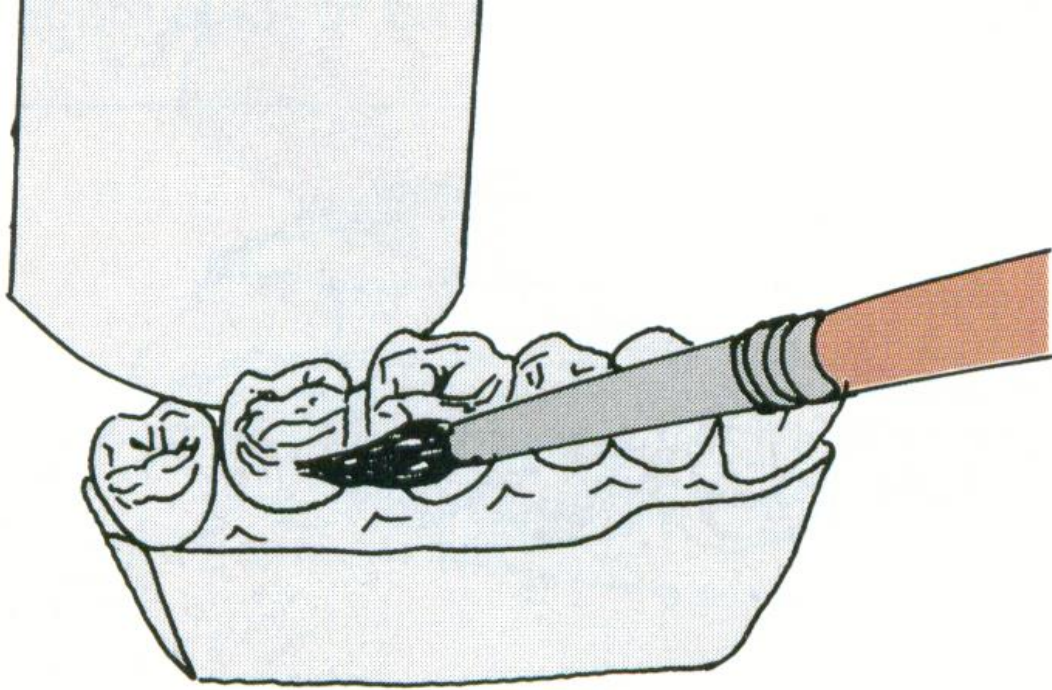


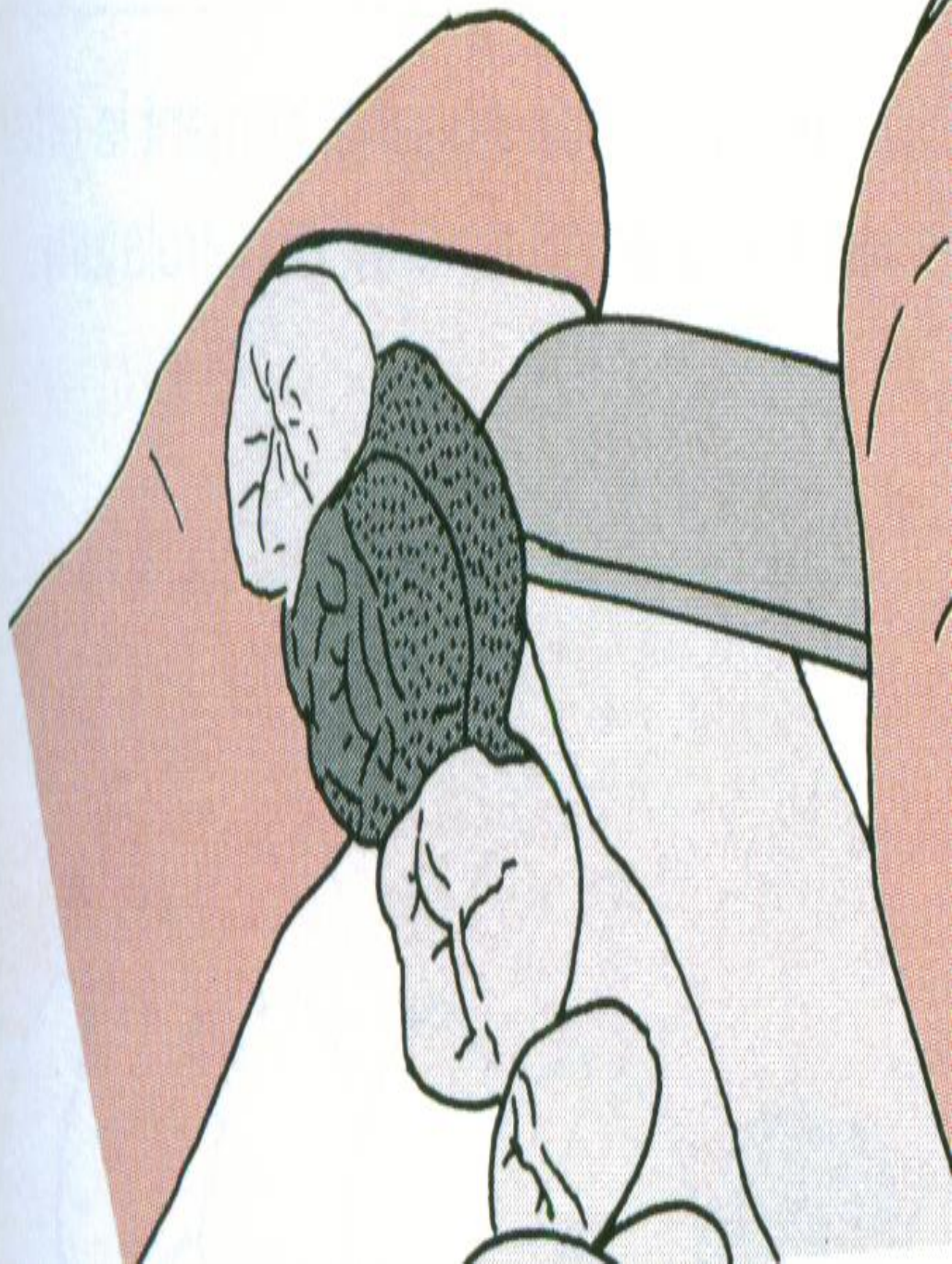
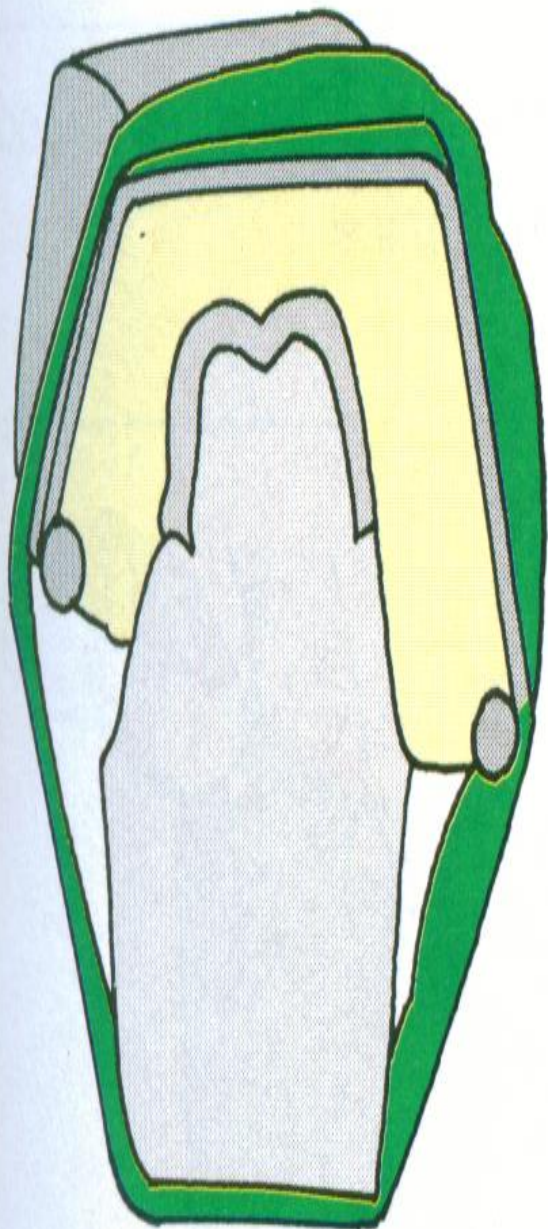
12



13







Combination of the indirect and direct technique

Temporary restoration can be constructed in the laboratory on an altered diagnostic cast and adjusted in the patient mouth.

:Steps

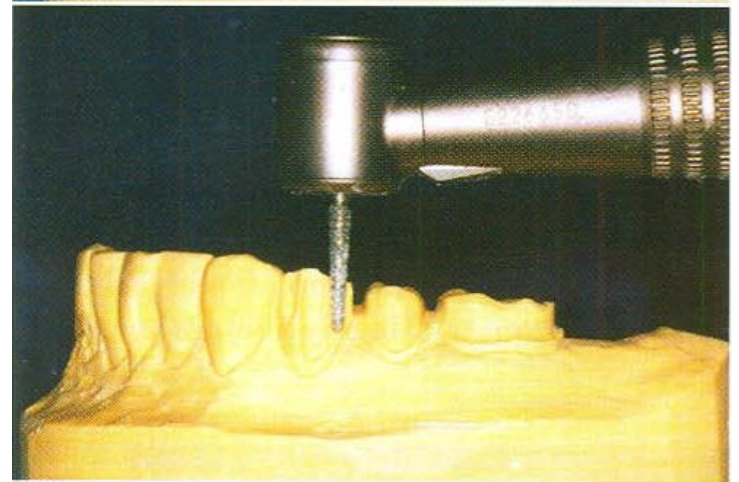
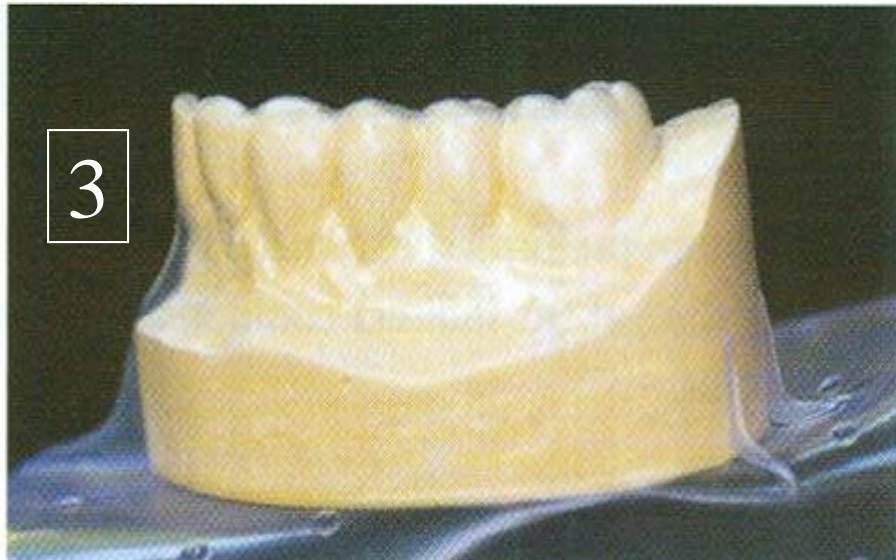
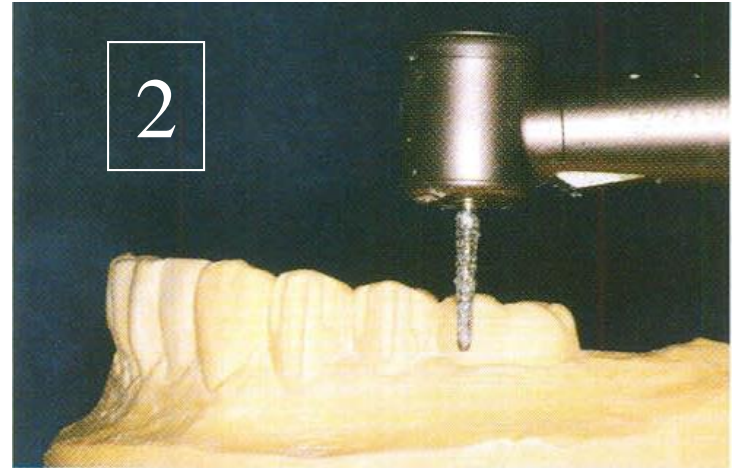
**On the cast any abutment defects should be -1
corrected by wax. Pontics are built in the place
.of missed teeth**

**Impression is taken for the cast to produce -2
.the needed mold**

**Stone teeth are reduced as preparation in the -3
dentist's mouth but to a lesser extent and coated
.with a separating medium**

Fill the impression with the resin and reseal it on the -4 cast. After resin setting we have a thin .walled restoration

As the preparation inside the patient mouth is -5 greater than that on the cast the fitting of the temporary restoration is enhanced through filling the restoration by resin and seating the restoration .inside the patient mouth



4



Fig. 15-41

The completed custom-preformed external surface form (ESF). This is the end product of the indirect component of the indirect-direct technique.

5

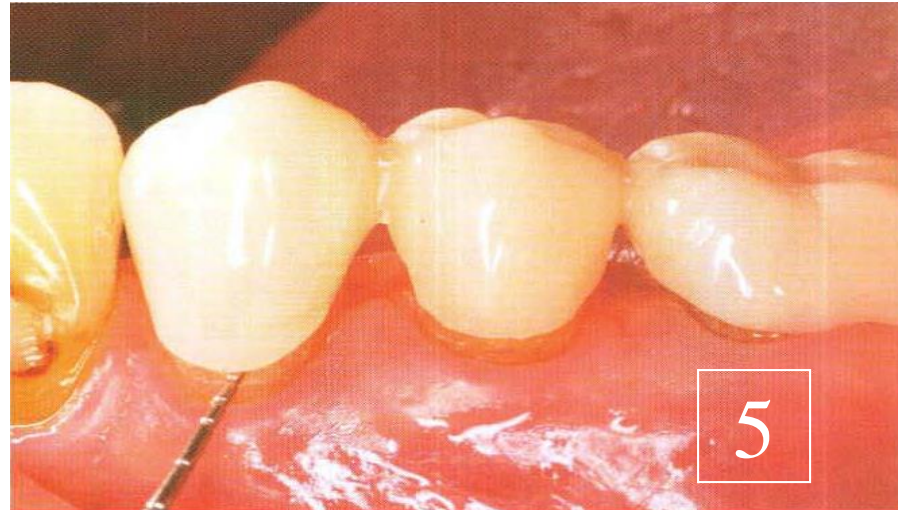


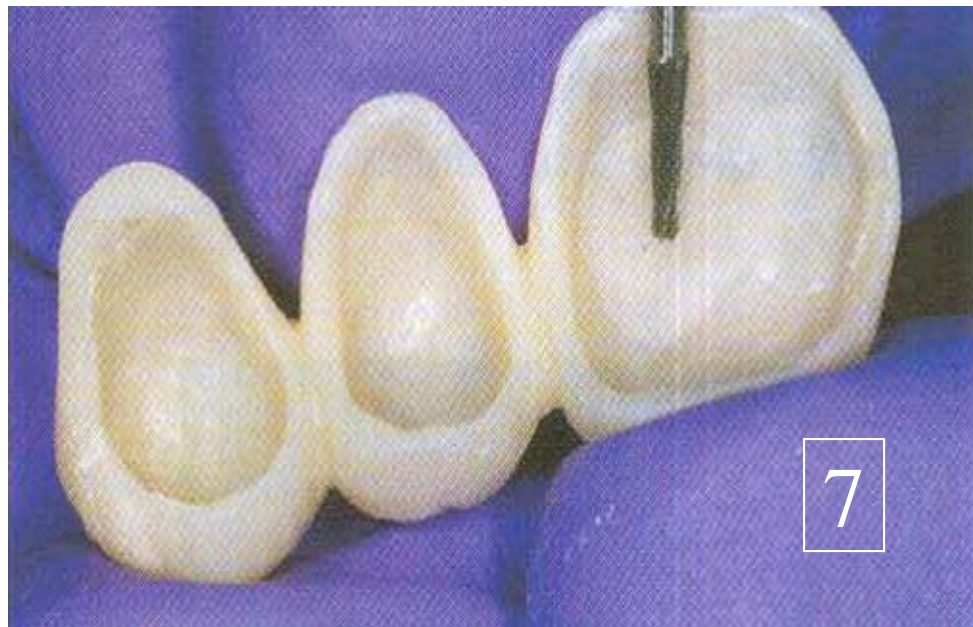
Fig. 15-42

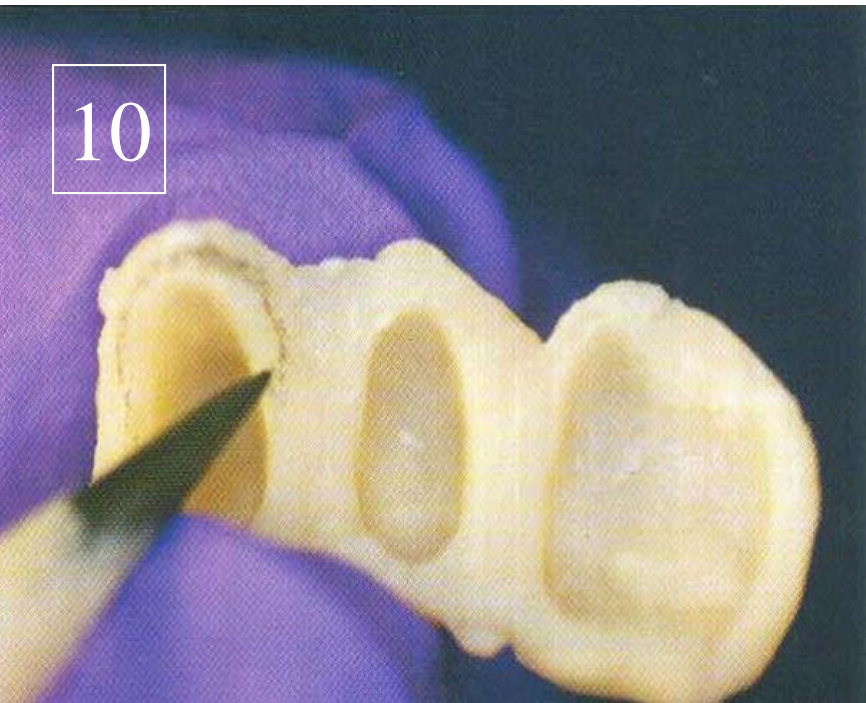
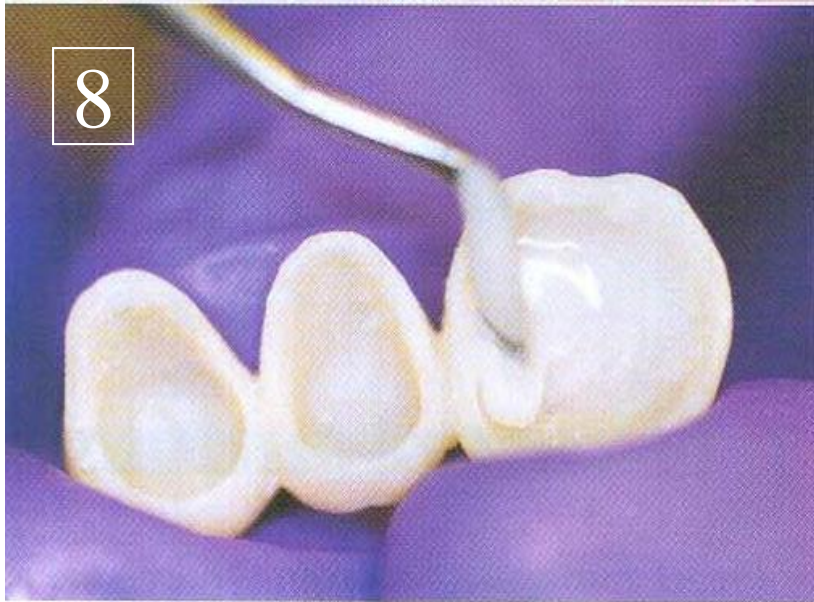
The custom-preformed external surface form (ESF) fully seated over the prepared teeth. Note the marginal discrepancy on each abutment. The tip of the periodontal probe easily fits into the space, which will be filled by a direct lining procedure.

6



7





*Prefabricated
provisional
restoration*



Metal crown e.g. Aluminum shell, stainless steel and Ni-Chromium crowns



Tooth colored polycarbonate crown



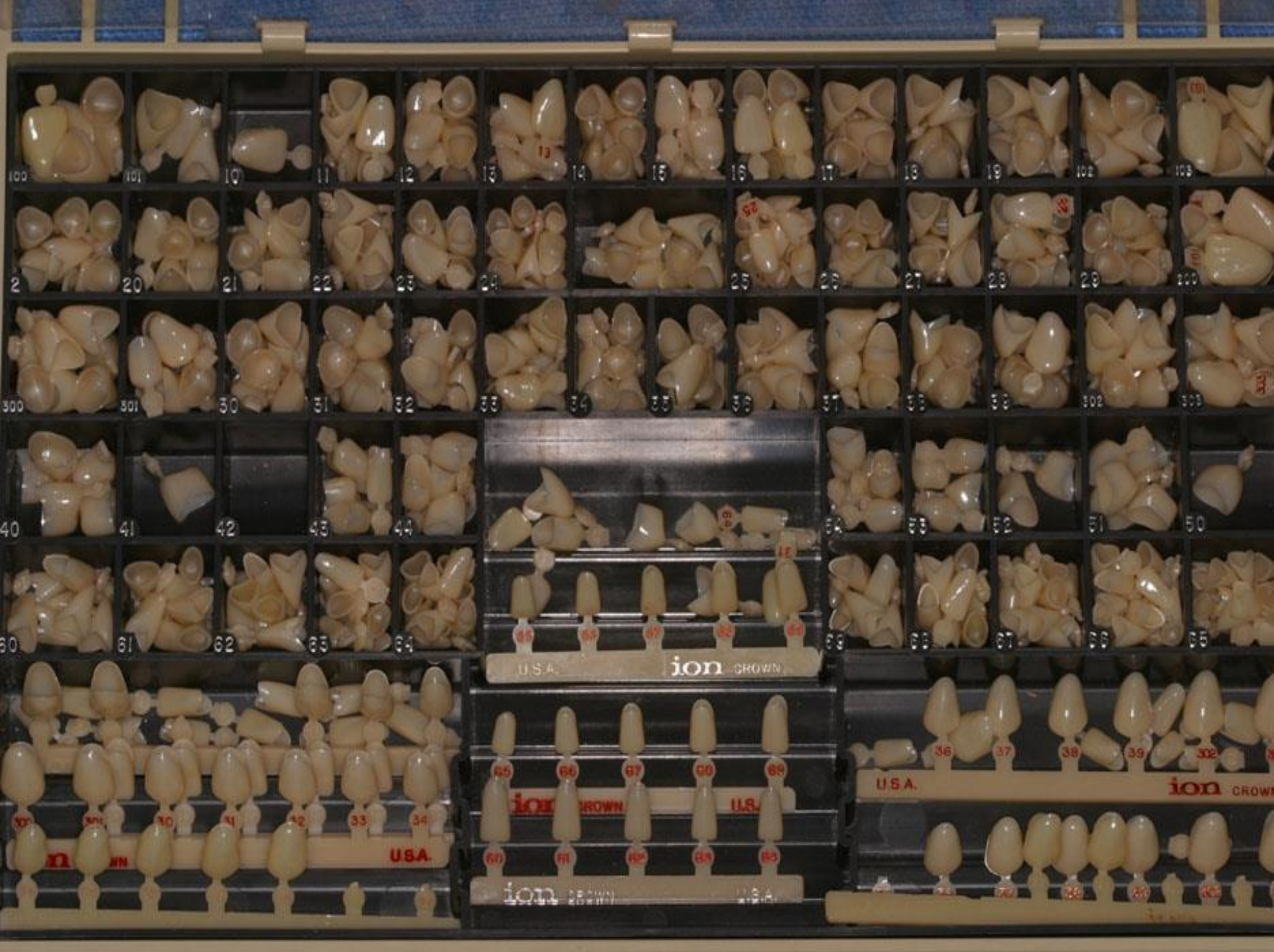
.Clear cellulose acetate crown



FABRICATION OF PROVISIONAL
RESTORATION USING

POLYCARBONATE CROWN

The technique used for the three types of prefabricated temporary crowns except that cellulose acetate crown does not form a part of the final form of temporary crown and it has to be removed





Copyright © 2003, Elsevier Science (USA). All rights reserved.







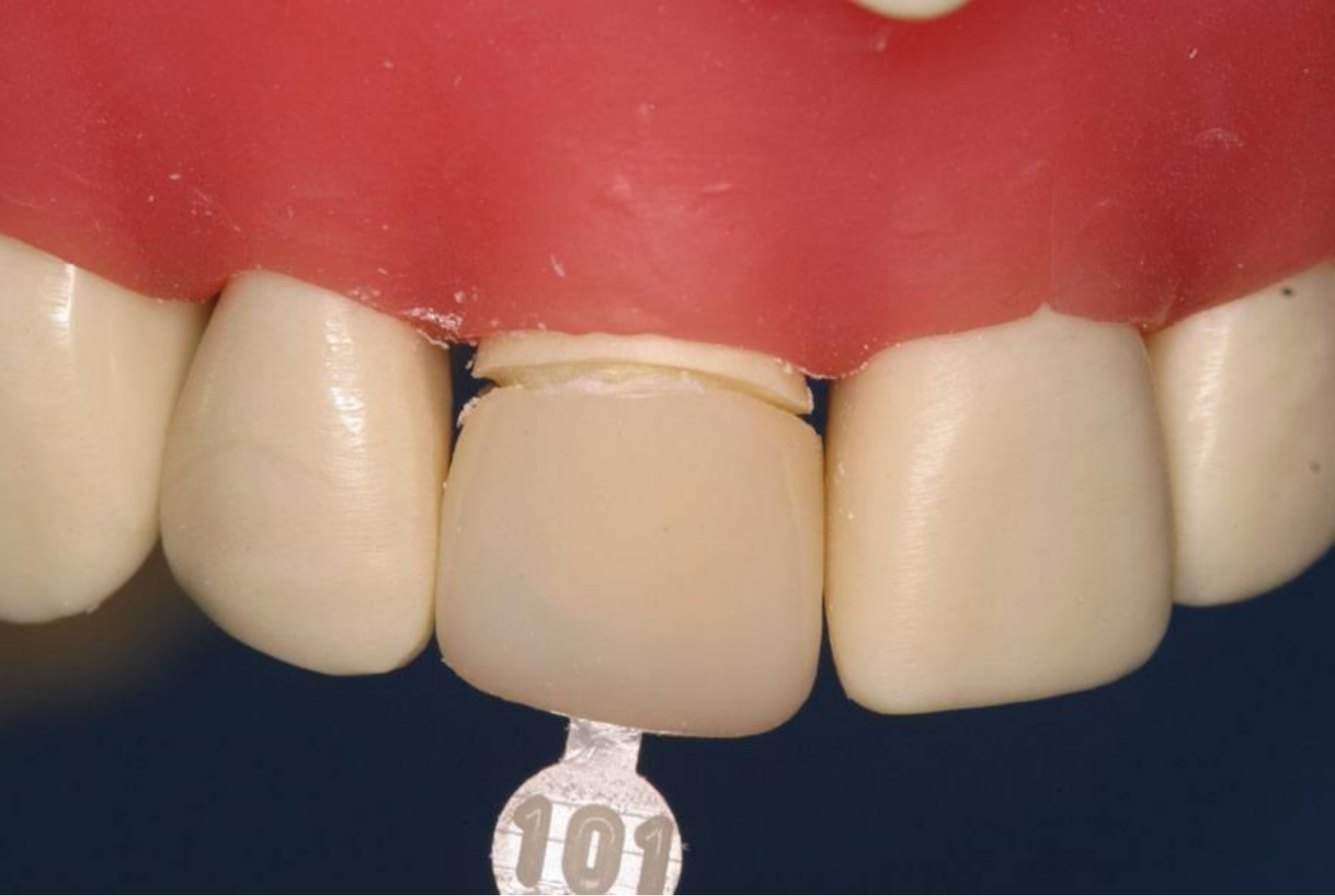






Select the crown according to its M-D size





.Trim the crown to suitable size



Apply separating medium to the tooth



Mix self cure acrylic resin.



Fill the crown with the mixed resin and fit it to the prepared tooth.





.Remove excess resin before its setting



UCLA SCHOOL OF DENTISTRY
RESTORATIVE DENTISTRY
PROVISIONAL TRIMMING



251
060



H295EF
023



H796G
070



911
220



934
180



0684
LX PINK
STEP 2



0654
YELLOW
STEP 3

A702PR



BRASSELER USA

DENTAL ROTARY INSTRUMENTS

800-841-4522





.Adjust occlusion





.Polishing of the crown



Temporary cement is used to cement the temporary
.crown

ALUMINIUM
CROWN



U69 12,0 mm



U67 11,5 mm



U65 11,1 mm



U63 10,7 mm



U61 10,3 mm

UPPER



U60 10,3 mm



U62 10,7 mm



U64 11,1 mm



U66 11,5 mm



U68 12,0 mm



U79 10,5 mm



U77 10,2 mm



U75 9,9 mm



U73 9,5 mm

U71 9,0 mm
LEFTU70 9,0 mm
RIGHT

U72 9,5 mm



U74 9,9 mm



U76 10,2 mm



U78 10,5 mm



L69 12,4 mm



L67 12,0 mm



L65 11,7 mm



L63 11,4 mm



L61 11,1 mm



LOWER



L60 11,1 mm



L62 11,4 mm



L64 11,7 mm



L66 12,0 mm



L68 12,4 mm



L79 11,6 mm



L77 11,2 mm



L75 10,8 mm



L73 10,4 mm



L71 9,8 mm



L70 9,8 mm



L72 10,4 mm



L74 10,8 mm

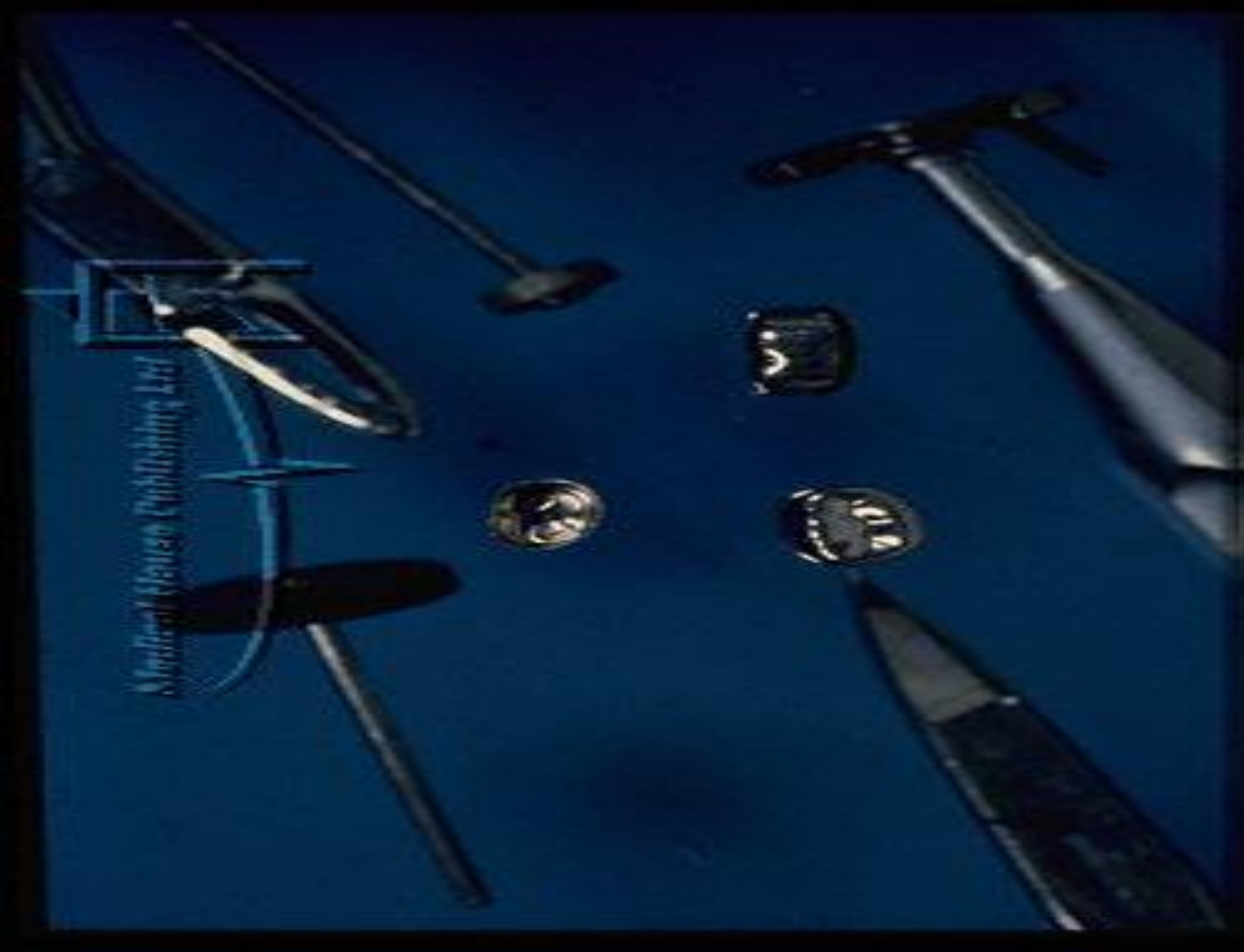


L76 11,2 mm



L78 11,6 mm

Montefiore House Publishing Ltd







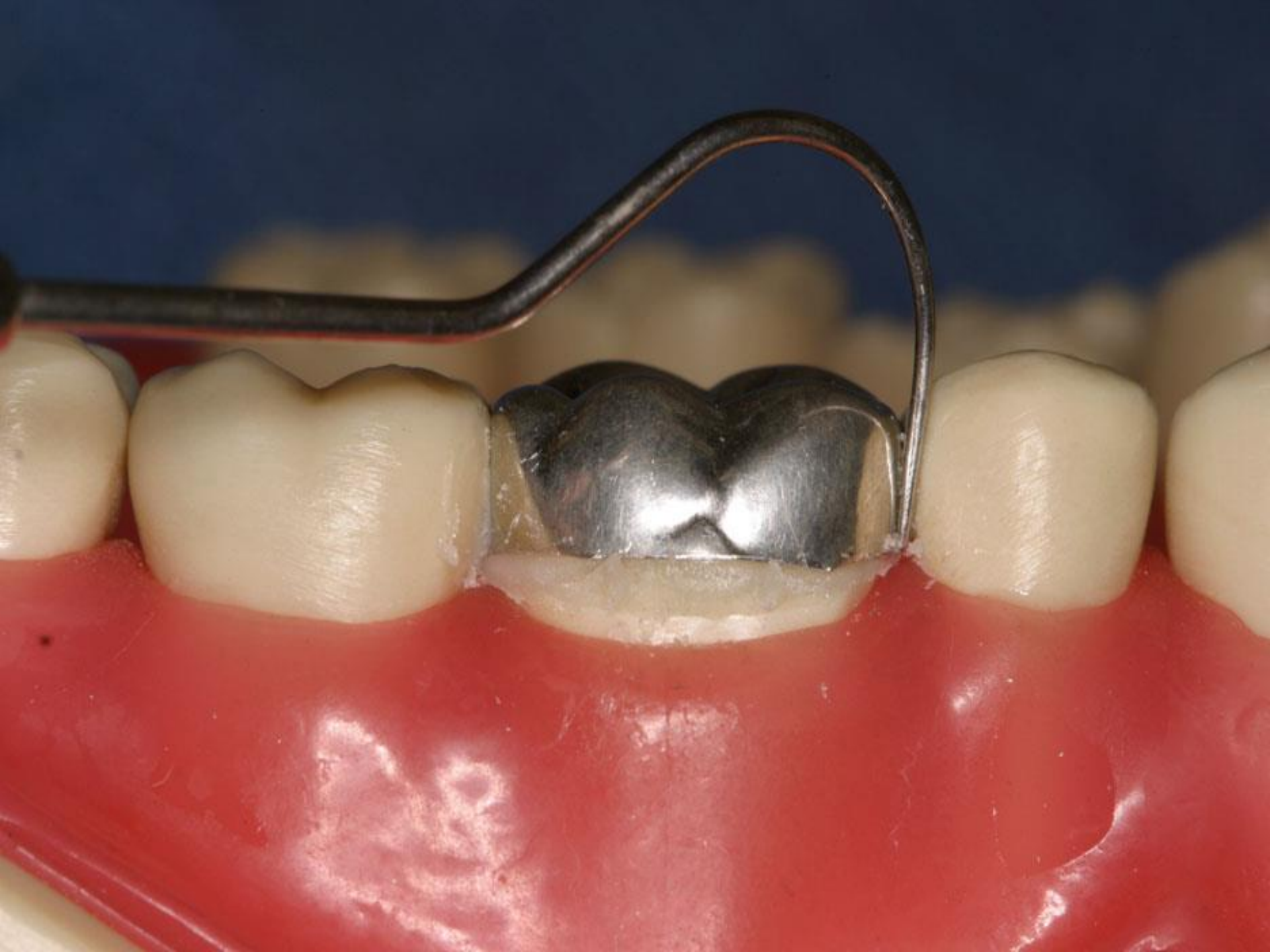
















Inlay and Onlay



Provisional restoration for

Endodontically

Treated

Teeth

**If the tooth has sufficient coronal structure to
retain the temporary crown , a prefabricated
crown can be used if not the canal has to be used
.to offer retention**



Select a preformed crown of suitable size



.Trim the selected crown



Orthodontic wire or plastic post is cut to fit to the canal and extend inside the crown to a point not interfering with proper crown seating (the wire .(is hooked





.Mix resin in a dapping dish



The mixed resin is applied to the tooth and inside
.the temporary crown





.The temporary crown is fitted in place



.Excess resin is removed



UCLA SCHOOL OF DENTISTRY
RESTORATIVE DENTISTRY
PROVISIONAL TRIMMING



251
060



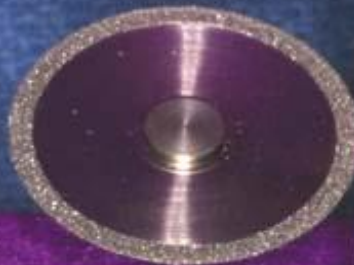
H295EF
023



H795G
070



911
220



934
180



0684
II PINK
STEP 2



0654
YELLOW
STEP 3



BRASSLER USA
DENTAL ROTARY INSTRUMENTS

800-841-4522

A702PR

Finishing kit

The crown is removed and replaced several times before the resin is completely hardened and its interlocking in any undercut



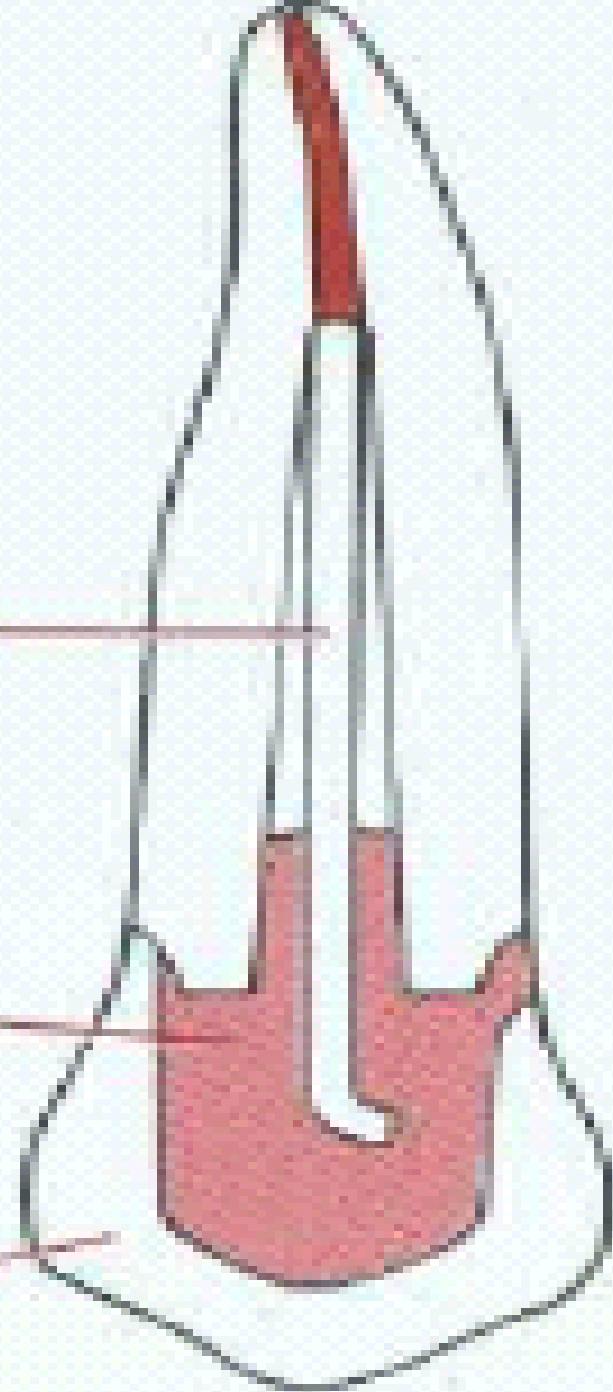
The final temporary restoration ready for cementation



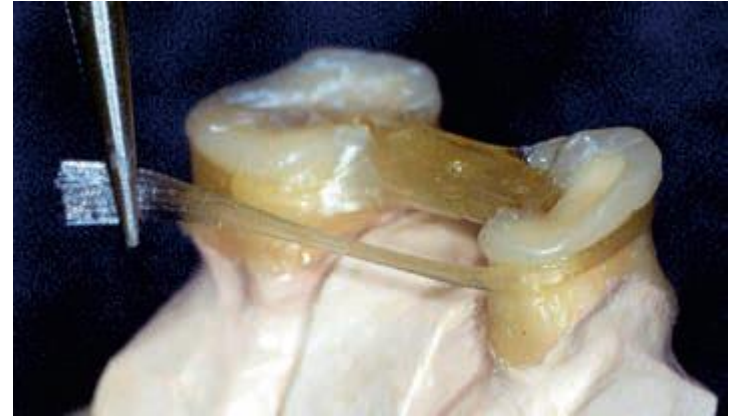
Reinforcing
wire

Autopolymerizing
resin

Preformed
crown



■ Fiber reinforced composite interim FDP



■ Digital interim fixed restorations



Desirable characteristics of an interim luting agent :are

- .Seal against leakage of oral fluid
- .Strength consistent with intentional removal
- .Low solubility
- .Blandness or obtundent quality
- .Chemical compatibility with the interim polymer
- .Convenience of dispensing and mixing
- .Ease of eliminating excess
- .Adequate working time and short setting time

